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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of:

Hanko et al.

Application No.: 09/513,652

Confirmation No.: 6825

Filed: February 25, 2000

For: METHOD AND APPARATUS FOR
IMPROVING UTILIZATION OF A RESOURCE
ON A SHARED CLIENT

)
) Group Art Unit: 2144

)
) Examiner: Nguyen, Thanh T

)
) Atty. Docket No: SUNMP578

)
) Date: October 25, 2004

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Commissioner for Patents, Mail Stop Appeal Brief-Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on **October 25, 2004**.

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Cynthia K. Dawn

**TRANSMITTAL OF APPEAL BRIEF
(PATENT APPLICATION -- 37 CFR 192)**

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Mail Stop: Appeal Brief- Patents
Alexandria, VA 22313-1450

Sir:

This Appeal Brief is in furtherance of the Notice of Appeal filed in this case on August 19, 2004. The Notice of Appeal was received by the USPTO on August 24, 2004. Therefore, the due date for this Appeal Brief is October 24, 2004. This Appeal Brief is transmitted in triplicate:

This application is on behalf of:

☐ Small Entity ☒ Large Entity

Pursuant to 37 CFR 1.17(f), the fee for filing the Appeal Brief is:

☐ \$170.00 (Small Entity) ☒ \$340.00 (Large Entity)

The proceedings herein are for a patent application and the provisions of 37 CFR 1.136 apply:

☐ Applicant petitions for an extension of time under 37 CFR 1.136 (fees: 37 CFR 1.17(a)-(d)) for the total number of months checked below:

<u>Months</u>	<u>Large Entity</u>	<u>Small Entity</u>
<input type="checkbox"/> one	\$110.00	\$55.00
<input type="checkbox"/> two	\$430.00	\$215.00
<input type="checkbox"/> three	\$980.00	\$490.00

☐ If an additional extension of time is required, please consider this a petition therefor.

☐ An extension for __ months has already been secured and the fee paid therefor of \$ is deducted from the total fee due for the total months of extension now requested.

☒ Applicant believes that no extension of term is required. However, this conditional petition is being made to provide for the possibility that Applicant has inadvertently overlooked the need for a petition and fee for extension of time.

Total Fees Due:

Appeal Brief Filing Fee	\$ <u>340.00</u>
Extension Fee (if any)	\$ <u>0.00</u>
Total Fee Due	\$<u>340.00</u>

☒ Enclosed is Check No. 12752 in the amount of \$340.00.

☒ Charge any additional fees or credit any overpayment to Deposit Account No. 50-0850, (Order No. SUNMP578). Two copies of this transmittal are enclosed.

Respectfully submitted,
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PATENT

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

EX PARTE James HANKO et al.

Application for Patent

Filed February 25, 2000

Application No. 09/513,652

FOR:

**METHOD AND APPARATUS FOR IMPROVING UTILIZATION OF A
RESOURCE ON A SHARED CLIENT**

APPEAL BRIEF

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Signed: Cynthia K. Dawn
Cynthia K. Dawn

**MARTINE & PENILLA, LLP
Attorneys for Applicants**



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APPENDIX A - CLAIMS ON APPEAL



REAL PARTY IN INTEREST

The real party in interest is Sun Microsystems, Inc., the assignee of the present application.

II. RELATED APPEALS AND INTERFERENCES

The undersigned is not aware of any related appeals or interferences.

III. STATUS OF THE CLAIMS

Claims 20-39 are pending in the subject application. Claims 1-19 have been canceled. Claims 20-39 have been finally rejected and are on appeal.

IV. STATUS OF THE AMENDMENTS

Applicants have not submitted any amendment subsequent to final rejection.

V. SUMMARY OF THE INVENTION

The subject invention is directed toward a method for improving access to resources on a client server. In this method, a client server serves applications to a stateless desktop unit. When an application served to the stateless desktop unit becomes inactive, a filter located within the client server filters the application from the applications (see page 29, line 23 – page 31, line 10). Subsequently, the client server sends a signal to the application via the filter to indicate that the application should stop or reduce consuming resources on the client server. When the application served to the stateless desktop unit resumes activity, the client server sends another signal to the application via the filter to indicate that the application should resume or increase consuming the resources on the client server.

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VI. ISSUE

- A. Whether Claims 20-30 and 36-39 are Patentable under 35 U.S.C. § 103(a) over Spilo et al. (U.S. Patent No. 6,298,422) in View of Peterson et al. (U.S. Patent No. 6,549,934) and Susai et al. (U.S. Patent No. 6,411,986).
- B. Whether Claims 31-35 are Patentable under 35 U.S.C. § 103(a) over Spilo et al. in View of Peterson et al.

VII. GROUPING OF THE CLAIMS

For purposes of this appeal only, claims 20-39 stand or fall together.

VIII. ARGUMENTS

- A. **The Combination of Spilo et al. in View of Peterson et al. and Susai et al. Would Not Have Suggested to One Having Ordinary Skill in the Art the Subject Matter of Claims 20-30 and 36-39.**

Claims 20-30 and 36-39 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,298,422 to Spilo et al. in view of U.S. Patent No. 6,549,934 to Peterson et al. and U.S. Patent No. 6,411,986 to Susai et al. As will be fully explained below, the combination of Spilo et al. in view of Peterson et al. does not raise a *prima facie* case of obviousness against independent claims 20 and 36.

Independent claims 20 and 36 define a method and a computer program product of improving access to one or more resources on a client server. Specifically, a plurality of applications are served from the client server to a stateless desktop unit (DTU). Thereafter, a determination is made as to when an application served from the client server to the stateless DTU should become inactive. The application is then filtered from the plurality of applications served from the client server via a filter.

In response to the Amendment mailed on February 23, 2004 and Request for Reconsideration mailed on August 19, 2004, the Examiner notes that Peterson et al. disclose the filter that filters applications served from the client server (see Final Office

Action mailed May 19, 2004 at page 10 and Advisory Action mailed September 21, 2004). Applicants respectfully traverse the Examiner's characterization of Peterson et al. relative to independent claims 20 and 36 because the portions of the reference relied upon by the Examiner (col. 5, lines 16-31 and 35-50; col. 6, lines 32-55; and col. 8, lines 20-30 at page 2) do not teach or suggest the filter that filters applications, as defined in independent claims 20 and 36. In particular, column 5, lines 20-23 discloses:

the server filter object 78 may block any IRPs (e.g., via a server application 86, file system 88, I/O manager 90 and optional driver stack 92) from reaching the device driver 82 other than those originating from the client filter driver 68.

Thus, Peterson et al. do not teach or suggest the server filter object blocking a server application, a file system, etc. Instead Peterson et al. disclose the server filter object blocking IRPs via a server application, a file system, an I/O manager, etc. In other words, Peterson et al. teach or suggest the use of a server application, a file system, etc. to implement the server filter object. The server filter object merely blocks (*i.e.*, filters) I/O Request Packets (IRPs). In contrast, independent claims 20, 36, and 31 define the filtration of applications. As I/O Request Packets are not applications, Peterson et al. cannot reasonably be considered to teach or suggest the filter that filters applications, as defined in independent claims 20 and 36.

Additionally, in support of the 35 U.S.C. § 103(a) rejections, the Examiner notes that Spilo et al. teach or suggest a plurality of applications being served from the client server to a stateless desktop unit (DTU). Applicants respectfully traverse the Examiner's characterization of Spilo et al. relative to independent claims 20 and 36 because the portions of the reference relied upon by the Examiner (col. 3, lines 35-47 and col. 4, lines 1-13) do not teach or suggest a plurality of applications being served from the client server to the stateless DTU, as defined by independent claims 20 and 36.

Specifically, Spilo et al. disclose “a method for improving the efficiency of multitasking applications in a computer system” (col. 8, lines 34-35 and col. 1, lines 6-8). Thus, Spilo et al. merely disclose the execution of applications on a single computer system. No applications are served from one computer system to another computer system. In contrast, independent claims 20 and 36 define the client server serving applications to the stateless desktop unit. In fact, neither the term “client” nor the term “server” is disclosed anywhere in Spilo et al. As Spilo et al. only disclose improving multitasking applications in a single computer system, Spilo et al. cannot reasonably be considered to teach or suggest applications being served from the client server to a stateless DTU, as defined in independent claims 20 and 36.

The Examiner also notes that Spilo et al. teach or suggest the method operation of determining when an application served from the client server to the stateless DTU should become inactive, as defined in independent claims 20 and 36. Applicants respectfully traverse the Examiner’s characterization of Spilo et al. relative to independent claims 20 and 36 because the portion of the reference relied upon by the Examiner (col. 4, lines 38-67) does not teach or suggest the method operation of determining when the application served from the client server to the stateless DTU should become inactive, as defined in independent claims 20 and 36. Specifically, at column 4, lines 38-39, Spilo et al. do disclose minimizing (*i.e.*, suspending) the application. However, Spilo et al. teach “a method enabling the *user* to suspend a running, inactive application” because “it is desirable to leave the decision to suspend the application to the *user*” (col. 3, lines 24-27). As a result, the invention disclosed in Spilo et al. does not make a determination as to when to suspend a running application. Instead, the user manually suspends the application. In contrast, independent claims 20 and 36 define a method operation of determining when the application served from the

client server to the stateless DTU should become inactive. As Spilo et al. merely teach the user manually suspending the application, Spilo et al. cannot reasonably be considered to teach or suggest the method operation of determining when the application served from the client server to the stateless DTU should become inactive, as defined in independent claims 20 and 36.

To establish a *prima facie* case of obviousness, the prior art references must teach or suggest all the claim limitations (see M.P.E.P. §2143). Here, in view of the incorrect characterization of Spilo et al. and Peterson et al., the references as combined do not teach all the features of the claimed invention.

Additionally, to establish a *prima facie* case of obviousness based on a combination of references, there must be some suggestion or motivation, either in the references or in the knowledge generally available to one having ordinary skill in the art, to combine the references in the manner proposed. As will be explained below, the Examiner has not established a *prima facie* case of obviousness against the claimed subject matter because one having ordinary skill in the art would not have combined Spilo et al. and Peterson et al. in the manner proposed by the Examiner.

The teachings of Spilo et al. focus on reducing the memory requirements for an application program executing in a multi-tasking environment. In contrast, the teachings of Peterson et al. relate to providing remote access and control of devices such as disks, tape drives, and modems across a network. The problems associated with reducing memory requirements in a multi-tasking environment and providing remote access and control of devices relate to entirely different technologies and applications. As the teachings of Spilo et al. have nothing to do with the problems addressed by Peterson et al., Applicants submit that there would not have been any motivation for

one having the ordinary skill in the art to combine Spilo et al. and Peterson et al. in the manner proposed by the Examiner.

Furthermore, if the proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification (See M.P.E.P. §2143). In this case, Spilo et al. teach the interception of a program's entry points "in order to inhibit the application from executing for the period of time that it is to be suspended" (col. 4, lines 50-52). However, "[m]essages that are critical or private to the application, are preferably passed through to the window procedure if necessary to keep the application functioning properly" (col. 4, lines 64-67). As such, Spilo et al. disclose a filter like operation that intercepts window messages but allows critical messages necessary for the functioning of the application to pass through.

In contrast, the filtering criteria of the server filter object disclosed in Peterson et al. is not based on the necessity for the proper functioning of an application. Instead, the server filter object filters I/O Request Packets (IRPs) by "properly handl[ing] duplicate requests by ignoring stale retries, (i.e., a retry number lower than previously seen), switching paths for replying to active requests, and re-sending replies for previously completed requests" (col. 6, lines 47-51).

If Spilo et al. is modified in accordance with the teachings of Peterson et al., then Spilo et al. would handle or intercept message with stale retries, re-sending replies for completed messages, etc. However, Spilo et al. would then block messages that are critical or private to the functioning of the application because the filtering criteria taught by Peterson et al. is not based on the functioning of an application. Furthermore, the application of the filtering criteria of Peterson et al. to Spilo et al. simply does not

make sense as the filter of Peterson et al. relates to I/O Request Packets while the filter like operation of Spilo et al. relates to messages required for the execution of an application. Therefore, the proposed modification of Spilo et al. in view of the server filter object of Peterson et al. renders Spilo et al. inoperable for its intended purpose of allowing critical messages for the proper functioning of an application to pass through because the filtering criteria disclosed in Peterson et al. and Spilo et al. are completely different, and very much incompatible. Since the combination would render Spilo et al. unsatisfactory for its intended purpose of allowing critical messages to pass through, then there is no suggestion or motivation to make the proposed combination or modification.

In summary, Applicants respectfully submit that the combination of Spilo et al. in view of Peterson et al. and Susai et al. does not raise a *prima facie* case of obviousness against the subject matter defined in independent claims 20 and 36 because (1) the combination is based on an improper characterization of Spilo et al. and Peterson et al., and (2) the requisite motivation to combine Spilo et al. and Peterson et al. in the manner proposed by the Examiner is lacking. Accordingly, for at least these reasons, independent claims 20 and 36 and their dependent claims 21-30 and 37-39 are patentable under 35 U.S.C. §103(a) over the combination of Spilo et al. in view of Peterson et al. and Susai et al. Thus, the rejection of claims 20-30 and 36-39 under 35 U.S.C. §103(a) as being unpatentable over Spilo et al. in view of Peterson et al. and Susai et al. is improper and should be reversed.

B. The Combination of Spilo et al. in View of Peterson et al. Would Not Have Suggested to One Having Ordinary Skill in the Art the Subject Matter of Claims 31-35.

Claims 31-35 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Spilo et al. in view of Peterson et al. Similar to independent claims 20 and 36 as discussed above, independent claim 31 also defines a client server serving a plurality of applications to a stateless DTU. In particular, independent claim 31 defines a filter that manages consumption of a resource and transmits a first signal to at least one member of a plurality of applications indicating that the member should stop consuming the resource.

For the same reasons stated above for independent claims 20 and 36, Peterson et al. cannot reasonably be considered to teach or suggest the filter that filters applications, and Spilo et al. cannot reasonably be considered to teach or suggest applications being served from the client server to a stateless DTU, as defined in independent claim 31. Furthermore, as discussed above, Applicants submit that there would not have been any motivation for one having the ordinary skill in the art to combine Spilo et al. and Peterson et al. in the manner proposed by the Examiner because (1) the teachings of Spilo et al. have nothing to do with the problems addressed by Peterson et al., and (2) the combination of Spilo et al. and Peterson et al. would render Spilo et al. unsatisfactory for its intended purpose of allowing critical messages for the proper functioning of an application to pass through.

Accordingly, for the above-stated reasons, Applicants submit that the combination of Spilo et al. and Peterson et al. does not raise a *prima facie* case of obviousness against the subject matter defined in independent claim 31 because (1) the combination is based on an improper characterization of Spilo et al. and Peterson et al., and (2) the requisite motivation to combine Spilo et al. and Peterson et al. in the manner proposed by the Examiner is lacking. Accordingly, for at least these reasons,

independent claim 31 and its dependent claims 32-35 are patentable under 35 U.S.C. §103(a) over the combination of Spilo et al. in view of Peterson et al. Thus, the rejection of claims 31-35 under 35 U.S.C. §103(a) as being unpatentable over Spilo et al. in view of Peterson et al. is improper and should be reversed.

C. Conclusion

For the foregoing reasons, the rejection of claims 20-39 under 35 U.S.C. § 103(a) is improper and should be reversed. In formulating the rejection of these claims, the Examiner has improperly characterized the teachings of Spilo et al. and Peterson et al. When considered objectively without the benefit of Applicants' teachings, the combination of Spilo et al. in view of Peterson et al. does not establish a *prima facie* case of obviousness against the claimed invention. Accordingly, Applicants respectfully submit that the obviousness rejections under 35 U.S.C. § 103(a) are in error, and request that the Board of Patent Appeals and Interferences reverse this rejection on appeal.

Respectfully submitted,
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APPENDIX A
CLAIMS ON APPEAL

20. A method of improving access to one or more resources on a client server comprising:

serving a plurality of applications from said client server to a stateless Desktop Unit (DTU);

determining when an application served from said client server to said stateless DTU should become inactive;

filtering said application from said plurality of applications served from said client server via a filter located within said client server and separated from said plurality of applications;

sending a first signal to said application served from said client server to indicate that said application should stop or reduce consuming said one or more resources on said client server via said filter;

determining when said application served from said client server should resume activity; and

sending a second signal to said application served from said client server to indicate that said application should resume or increase consuming said one or more resources on said client server via said filter.

21. The method of Claim 20, wherein said determining when said application should become inactive comprises determining when a session associated with a user is no longer active by identifying when said stateless DTU is disassociated with said session.

22. The method of Claim 21, wherein said client server maintains said session with said user when said user is disconnected with said stateless DTU.

23. The method of Claim 21, wherein said client server is shared by a plurality of stateless DTUs and wherein said determining when said application should resume activity comprises determining when said session becomes active by identifying when any stateless DTU of said plurality of stateless DTUs becomes re-associated with said session.

24. The method of Claim 23, wherein an identifier is used to cause the association and wherein said identifier comprises a smart card.

25. The method of Claim 21, wherein said filtered application is an application that continues to consume said one or more resources on said client server when said session associated with said user of said filtered application is no longer active.

26. The method of Claim 20, wherein said application is a member of said plurality of applications.

27. The method of Claim 26, wherein said member comprises a subset of said plurality of applications.

28. The method of Claim 20, wherein:
said first signal comprises an operating system command to stop a process; and
said second signal comprises an operating system command to start a process.

29. The method of Claim 20, wherein each of said serving, filtering, sending, and determining steps are performed without modifying said application in any way via said filter separated from said plurality of applications.

30. The method of Claim 20, wherein said client server provides a computational power for said stateless DTU and a state maintenance for said stateless DTU.

31. A client server serving a plurality of applications to a stateless Desktop Unit (DTU), the client server comprising:

a resource;

a filter for managing consumption of said resource;

wherein said filter is separated from said plurality of applications;

a first session associated with a user on a first stateless DTU;

wherein said first session is disassociated with said first DTU, indicating that said first session is inactive;

a first signal transmitted from said filter to at least one member of said plurality of applications indicating that said at least one member should stop consuming said resource;

wherein said first session associated with said user becomes re-associated with any stateless DTU, indicating that said session has resumed activity; and

a second signal transmitted from said filter to said at least one member indicating that said at least one member should resume consuming said resource.

32. The server of Claim 31, wherein said any stateless DTU comprises said first stateless DTU and a second stateless DTU.

33. The server of Claim 31, wherein an identifier is used to cause the association and wherein said identifier comprises a smart card.

34. The server of Claim 31, wherein said client server comprises a first client server and a second client server, wherein said first and second signals are sent by said first client server comprising said filter, and wherein said plurality of applications are served by said second client server.

35. The server of Claim 31, wherein said at least one member comprises a subset of said plurality of applications.

36. A computer program product comprising:
a plurality of client servers having computer readable program code embodied therein for improving access to one or more resources on said plurality of servers comprising:

computer readable program code configured to cause a stateless Desktop Unit (DTU) to improve access to one or more resources on at least one of said plurality of client servers serving a plurality of applications to said DTU comprising:

computer readable program code configured to cause at least one of said plurality of client servers to determine when an application should become inactive;

computer readable program code configured to cause a filter on at least one of said plurality of client servers to filter said application from said plurality of application;

computer readable program code configured to cause at least one of said plurality of client servers via said filter to send a first signal to said application indicating that said application should stop or reduce consuming said one or more resources;

computer readable program code configured to cause at least one of said plurality of client servers to determine when said application should resume activity; and

computer readable program code configured to cause at least one of said plurality of client servers via said filter to send a second signal to said application indicating that said application should resume or increase consuming said one or more resources.

37. The computer program product of Claim 36, wherein said computer readable program code configured to cause said client server to determine when said application should become inactive comprises computer readable program code configured to cause at least one of said plurality of client servers to determine when a session is no longer active by identifying when said stateless DTU is disassociated with said session.

38. The computer program product of Claim 36, wherein said computer readable program code configured to cause said server to determine when said application should resume activity comprises computer readable program code configured to cause at least one of said plurality of client servers to determine when said session becomes active by identifying when any DTU becomes re-associated with said session.

39. The computer program product of Claim 36, wherein said first signal and said second signal comprise operation system commands.